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EXAMINER
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BROWN JR, NATHAN H

ART UNIT	PAPER NUMBER
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2129

NOTIFICATION DATE	DELIVERY MODE
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08/06/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/886,824	<b>Applicant(s)</b> VELIUS, GEORGE ALFRED	
	<b>Examiner</b> NATHAN H. BROWN JR	<b>Art Unit</b> 2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE (3) MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 23, 25-31, 35, 37-39, 41-44 and 52-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23, 25-31, 35, 37-39, 41-44, and 52-59 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### Examiner's Detailed Office Action

1. This Office is responsive to application 09/886,824, filed July 14, 2009.

2. Claims 23, 25-31, 35, 37-39, 41-44, and 52-59 are pending. Claims 23, 25-31, 35, 37-39, 41-44, and 52-59 are previously presented.

3. After the previous office action, claims 23, 25-31, 35, 37-39, 41-44, and 52-59 stood rejected.

### Objections to the Drawings

4. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because applicant asserts that the invention is directed toward an "adaptive speaker identity verification system" rather than an application of normalized detector scaling to either parametric or non-parametric systems, as currently depicted. Figs. 1-6 should be replaced by a figures particularized to show:

(A) operating an "adaptive speaker identity verification

system”;

(B) handling of speech data;

(C) a decision space based upon pooled statistics drawn from speech data;

(D) the three parts of the NDS method, the: NDS transform constructor 62, NDS transform 63, and NDS transformer 64; operating an “adaptive speaker identity verification system” in the NDS setup phase 610 and the NDS operations phase 620; or these features must be removed from the claims.

Figs. 7-11 should be replaced by a figures particularized to show the connection between the establishment of speaker identity and the statistics generated and used by the invention to operate an “adaptive speaker identity verification system” must be made clear by the drawings or all claims teaching that normalized detector scaling can establish speaker identity must be withdrawn.

Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112, 1<sup>st</sup>

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 23, 25-31, 35, 37-39, 41-44, and 52-59 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Independent claims 23 and 35 recite "a normalized detector scale transformer solely utilizing the adaptive speaker identity verification system". A "normalized detector scale transformer *solely utilizing* the adaptive speaker identity verification system" [emphasis, examiner's] is not described in the specification in such a way as to reasonably convey to one skilled in the

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relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 25-31, 37-39, 41-44, and 52-59 do not cure the deficiency of claims 23 and 35. Therefore, claims 23, 25-31, 35, 37-39, 41-44, and 52-59 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

7. Claims 23, 25-31, 52, 53, and 59 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Amended independent claim 23 recites an algorithm for "utilizing an adaptive speaker identity verification system" which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically there is no description in the specification for "an adaptive speaker identity verification system":

receiving first input solely utilizing the adaptive speaker identity verification system, wherein the first input data

represents a person's unclassified speech;

receiving second input solely utilizing the adaptive speaker identity verification system, wherein the first input data represents in part probability distributions for authentic and spurious classes based upon the pooled output statistics of the adaptive speaker identity verification system, including the equal error rate, and which represents in part optional parameters to focus on at least one region of interest in a decision space;

computing a transform of the first input data using the second input data with a normalized detector scale transformer solely utilizing the adaptive speaker identity verification system onto a normalized, one dimension, decision scale based on the transform; and

establishing at least one decision criterion solely utilizing the adaptive speaker identity verification system, wherein the at least one decision criterion corresponds to a level of similarity or a level of dissimilarity between the first input data representing a person's unclassified speech data and the second input data with the adaptive speaker identity verification system.

Claims 25-31, 52, 53, and 59 do not cure the deficiency of

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claim 23. Therefore, claims 23, 25-31, 52, 53, and 59 are rejected under 35 U.S.C. 112, first paragraph, as failing to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

8. Claims 35, 37-39, 41-44, and 54-58 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Amended independent claim 35 recites "an adaptive speaker identity verification system" comprising: an adaptive speaker identity verification system, which *directly receives first input data*, which represents a person's unclassified speech, and *directly receives second input data*, which represents in part probability distributions for authentic and spurious classes based upon the pooled output statistics of the adaptive speaker identity verification system, including the equal error rate, and which represents in part optional parameters to focus on at least one region of interest in a decision space, wherein the adaptive speaker identity



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verification system then *computes a transform of the first input data using the second input data with a normalized detector scale transformer solely utilizing the adaptive speaker identity verification system* onto a normalized, one dimension, decision scale based on the transform and then the adaptive speaker identity verification system establishes at least one decision criterion, wherein the at least one decision criterion corresponds to a level of similarity or a level of dissimilarity between the first input data representing a person's unclassified speech data and the second input data solely utilizing the adaptive speaker identity verification system.

Specifically there is no description in the specification for "an adaptive speaker identity verification system" which *directly receives first input data*, which represents a person's unclassified speech; *directly receives second input data*, which represents in part probability distributions for authentic and spurious classes based upon the pooled output statistics of the adaptive speaker identity verification system; and *computes a transform of the first input data using the second input data with a normalized detector scale transformer solely utilizing the adaptive speaker identity verification system*.

Claims 37-39, 41-44, and 54-58 do not cure the deficiency of claim 35. Therefore, claims 35, 37-39, 41-44, and 54-58 are

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rejected under 35 U.S.C. 112, first paragraph, as failing to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

### Claim Rejections - 35 USC § 112, 2<sup>nd</sup>

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 23, 25-31, 52, 53, and 59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 23 recites the limitation "the second input data" in the 10<sup>th</sup> line of the claim. There is insufficient antecedent basis for this limitation in the claim. Claims 25-31, 52, 53, and 59 do not cure the deficiency of claim 23. Therefore, claims 23, 25-31, 52, 53, and 59 are rejected under 35 U.S.C. 112, second paragraph, as failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention.

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11. Claims 23, 25-31, 52, 53, and 59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Independent claim 23 recites "receiving first input...wherein the first input data represents a person's unclassified speech...receiving second input...wherein the first input data represents in part probability distributions". Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "first input" in claim 23 is considered to be used by the claim to mean "a person's unclassified speech" and "in part probability distributions". The term is indefinite because the specification does not clearly redefine the term (as it doesn't occur in the specification). Clearly, the "first input" cannot represent both "a person's unclassified speech" and "in part probability distributions" because the accepted meaning of a "person's unclassified speech" (in statistical classification)

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is an outcome of the random sampling of a person speaking while the accepted meaning of a probability distribution is a mapping from the set of possible outcomes of random sampling to the  $[0, \dots, 1]$  interval. Claims 25-31, 52, 53, and 59 do not cure the deficiency of claim 23. Therefore, claims 23, 25-31, 52, 53, and 59 are rejected under 35 U.S.C. 112, second paragraph, as failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention.

### Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 23 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by *Li* (USPNUM: 5,995,927).

Regarding claim 23. (Previously presented): *Li* teaches a method of utilizing an adaptive speaker identity verification system (see Abstract) comprising:

receiving first input solely utilizing the adaptive speaker identity verification system, wherein the first input data represents a person's unclassified speech (see col. 5, line 2, *Examiner interprets the "a typical speaker verification training session" to comprise receiving first input solely utilizing the adaptive speaker identity verification system, wherein the first input data represents a person's unclassified speech.*);

receiving second input solely utilizing the adaptive speaker identity verification system (see col. 5, line 32, *Examiner interprets the "a test (i.e., speaker verification) session" to comprise receiving second input solely utilizing the adaptive speaker identity verification system.*), wherein the first input data represents in part probability distributions for authentic and spurious classes based upon the pooled output statistics of the adaptive speaker identity verification system, including the equal error rate (see col. 8, lines 11-57, *Examiner interprets the "experimental database" to comprise the first input data. Examiner interprets the "target" and "background" HMMs to represent in part probability distributions for authentic and spurious classes based upon the pooled output statistics of the adaptive speaker identity verification system. Examiner interprets the  $L_R$  score threshold to be adjustable to achieve the equal error rate.*), and which represents in part

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optional parameters to focus on at least one region of interest in a decision space (see col. 7, line 52 to col. 8, line 12, *Examiner interprets "N<sub>f</sub>...the total number of non-silence frames in the phrase" to be in part optional parameters to focus on at least one region of interest in a decision space.*);

computing a transform of the first input data using the second input data (see col. 3, line 40 to col. 4, line 44, *Examiner interprets "the test data...advantageously transformed to more closely stochastically match the training data" to comprise computing a transform of the first input using the second input data.*) with a normalized detector scale transformer solely utilizing the adaptive speaker identity verification system onto a normalized, one dimension, decision scale based on the transform (see col. 7, lines 36-45, *Examiner interprets the "stochastic matching processor 34" to be a normalized detector scale transformer and "the transformed cepstral coefficients" to comprise a normalized, one dimension, decision scale based on the transform.*); and

establishing at least one decision criterion solely utilizing the adaptive speaker identity verification system, wherein the at least one decision criterion corresponds to a level of similarity or a level of dissimilarity between the first input data representing a person's unclassified speech

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data and the second input data with the adaptive speaker identity verification system (see col. 8, lines 28-32).

Regarding claim 35. (Previously presented): *Li* teaches an adaptive speaker identity verification system comprising:

an adaptive speaker identity verification system (see Abstract), which

directly receives first input data, which represents a person's unclassified speech (see col. 5, line 2, *Examiner interprets the "a typical speaker verification training session" to comprise directly receiving first input data which represents a person's unclassified speech.*), and

directly receives second input data (see col. 5, line 32, *Examiner interprets the "a test (i.e., speaker verification) session" to comprise receiving second input data.*), which represents in part probability distributions for authentic and spurious classes based upon the pooled output statistics of the adaptive speaker identity verification system, including the equal error rate (see col. 8, lines 11-57, *Examiner interprets the "experimental database" to comprise the first input data. Examiner interprets the "target" and "background" HMMs to represent in part probability distributions for authentic and spurious classes based upon the pooled output statistics of the*

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*adaptive speaker identity verification system. Examiner interprets the  $L_g$  score threshold to be adjustable to achieve the equal error rate.), and which represents in part optional parameters to focus on at least one region of interest in a decision space (see col. 7, line 52 to col. 8, line 12, Examiner interprets " $N_f$ ...the total number of non-silence frames in the phrase" to be in part optional parameters to focus on at least one region of interest in a decision space.), wherein*

*the adaptive speaker identity verification system then computes a transform of the first input data using the second input data (see col. 3, line 40 to col. 4, line 44, Examiner interprets "the test data...advantageously transformed to more closely stochastically match the training data" to comprise computing a transform of the first input using the second input data.) with a normalized detector scale transformer solely utilizing the adaptive speaker identity verification system onto a normalized, one dimension, decision scale based on the transform (see col. 7, lines 36-45, Examiner interprets the "stochastic matching processor 34" to be a normalized detector scale transformer solely utilizing the adaptive speaker identity verification system and "the transformed cepstral coefficients" to comprise a normalized, one dimension, decision scale based on the transform.) and then the adaptive speaker identity*



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verification system establishes at least one decision criterion, wherein the at least one decision criterion corresponds to a level of similarity or a level of dissimilarity between the first input data representing a person's unclassified speech data and the second input data solely utilizing the adaptive speaker identity verification system (see col. 8, lines 11-12, *Examiner interprets the the  $L_R$  score to establishes at least one decision criterion which corresponds to a level of similarity between the first input data representing a person's unclassified speech data and the second input data solely utilizing the adaptive speaker identity verification system.*).

## Response to Arguments

14. Applicant's arguments filed July 14, 2009 have been fully considered but they are not fully persuasive.

Rejection of Claims 23, 25-31, 35, 37-39, 41-44 and 52-59 Under  
35 U.S.C. § 112, 1<sup>st</sup>

### Written Description

Applicant(s) argue(s):

Claims 23, 25-31, 35, 37-39, 41-44 and 52-59 were rejected under 35 U.S.C. § 112, first paragraph for failing

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to comply with the written description requirement. Applicant has attached the Declarations under 37 C.F.R. §1.132 of Mark Yoder (see Appendix 1) and Michael Phillips (see Appendix 2), who are two renown experts in the field of electronic speech recognition. Both individuals clearly indicate that the term "adaptive speech recognition system" is well known in the art for a specific type of commercially available machine that digitizes an analog voice signal and analyzes the digital voice signal using a processor to identify the speaker. Both Mark Yoder and Michael Phillips believe that anyone skilled in the art of deploying an "adaptive speaker identity verification system" would clearly understand this standard industry terminology and would not have to have any additional details regarding the computing platform such as the processors, memory, and machine-readable media. Both individuals have reviewed Claims 23, 25-31, 35, 37-39, 41-44 and 52-59 and U.S. Patent Application No. 09/886,824 and believe that the Claimed Invention could be readily made by such a person skilled in the art using a common adaptive speaker identity verification system since it is a relatively simple and straightforward process that does not require any undue experimentation. Both individuals believe that the term "adaptive speaker identity verification system" would be well understood and the specification of a particular hardware configuration is not necessary and the Invention is not dependent upon a particular hardware or operating system configuration as it can be implemented on the "machine" (computing platform/operating system configuration) on which the adaptive speaker identity verification system runs.

Examiner interprets this to mean that the claimed invention is not associated with or tied to any particular machine.

Applicant(s) argue(s):

To support his conclusion, both Mark Yoder and Michael Phillips have provided literature from seven different companies manufacturing adaptive speaker identity

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verification systems. All of these systems could be easily adapted, without any undue experimentation, to perform the Applicant's Invention, as recited in Claims 23, 25-31, 35, 37-39, 41-44 and 52-59.

Examiner interprets this to mean that the claimed invention is unpatentable over SpeechWorks International, Inc. (Exhibit G of Declarations).

Therefore, the mere reference to an "adaptive speaker identity verification system" is more than sufficient according to these experts to provide an adequate written description of the Invention, as claimed. It is also important to note that the description of the hardware in most of these systems is sparse and in some cases, like IBM® (Exhibit B of Declarations), Nuance Communications, Inc. (Exhibit C of Declarations), PerSay Ltd. (Exhibit F of Declarations), and SpeechWorks International, Inc. (Exhibit G of Declarations), it is virtually nonexistent. This proves that the "adaptive speaker identity verification system" is a standard, commercially available product, where a description of the hardware is not necessary to put a person skilled in the art in complete possession of the Applicant's Invention, as claimed.

Examiner disagrees because 'proof by example' (known also as inappropriate generalization) is a logical fallacy whereby one or more examples (the Exhibits) are claimed as "proof" for a more general statement ("the "adaptive speaker identity verification system" is a standard, commercially available product, where a description of the hardware is not necessary to put a person skilled in the art in complete possession of the Applicant's Invention"). Now, the above 'proof' *might* have been

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valid if it led from a singular premise to an existential conclusion. For example:

Socrates is wise.

Therefore, someone is wise.

However, the above 'proof' leads from multiple premises, i.e.,

(i) "All of these systems could be easily adapted, without any undue experimentation", (ii) "the mere reference to an "adaptive speaker identity verification system" is more than sufficient according to these experts to provide an adequate written description of the Invention", (iii) "the description of the hardware in most of these systems is sparse and in some cases...virtually nonexistent"; and then asserts multiple conclusions, i.e., (a) 'the "adaptive speaker identity verification system" is a standard' and (b) "a description of the hardware is not necessary to put a person skilled in the art in complete possession of the Applicant's Invention".

Applicant(s) argue(s):

The inquiry into whether the description requirement is met must be determined on a case-by-case basis and is a question of fact. In re Wertheim, 541 F.2d 257, 262, 191 U.S.P.Q. 90, 96 (C.C.P.A. 1976). A description as filed is presumed to be adequate; unless or until sufficient evidence or reasoning to the contrary has been presented by the examiner to rebut the presumption. See, e.g., In re Marzocchi, 439 F.2d 220, 224, 169 U.S.P.Q. 367, 370 (C.C.P.A., 1971). The examiner, therefore, must have a

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reasonable basis to challenge the adequacy of the written description. In this case, the absence of a description of hardware used in the invention is only reasonable if the hardware was not a common and commercially available product. It is the opinion of voice recognition experts Mark Yoder and Michael Phillips that the Invention described in U.S. Patent Application No. 09/886,824 can easily be adapted to any commercially available "adaptive speaker identity verification system."

Examiner disagrees. With all due respect to the opinion of voice recognition experts Mark Yoder and Michael Phillips, examiner notes that the voice recognition experts have not addressed the features of the claims in light of the contents of the specification.

Further, examiner finds the applicant's specification to teach one thing and the claims to teach another. The applicant's specification teaches:

*Field of the Invention*

This invention pertains to the transformation of output data from pattern recognition systems. The output data is used in establishing decision rules or operating criteria in the deployment and administration of pattern recognition systems.

Then, after a discussion of the statistical properties of pattern recognitions in the *Background Information* section of the specification (pp. 1-5), applicants disclose:

BRIEF SUMMARY OF THE INVENTION

...

A general object of the present invention is to provide a simpler means of establishing the decision criteria for a pattern recognition system than is generally afforded by traditional methods such as operating characteristic analysis.

More specifically, an object of the present invention is to provide a Normalized Detector Scaling method that utilizes the class-specific probability distributions of a pattern recognition system to make the selection of the operating criteria independent of the particulars of the pattern recognition system. This being accomplished by transforming the pattern recognition system output statistics to a well-defined, one-dimensional scale.

Another object of the present invention is to provide an intuitive interface for decision criteria selection to those operating a pattern recognition system.

This clearly is not directed specifically toward an "adaptive speaker identity verification system". It is only in the *Background Information* section, page 4, of the specification that an "adaptive speaker identity verification system" is mentioned.

From its one time use in the background section of the specification, examiner can only interpret the "adaptive speaker identity verification system" to be "a second example" of pattern recognition systems that "can be described as being either parametric or non-parametric systems" (see specification, p. 1, §Background Information). The rest of the specification (see §DETAILED DESCRIPTION OF THE INVENTION) is a study of "the

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NDS transform" with no mention of how the discussed properties of the transform are used to transform speech data or establish the identity of a speaker.

Applicant(s) argue(s):

The Manual for Patent Examining Procedure ("M.P.E.P.") §2163.07(a) is very clear on this point, in that by: "...disclosing in a patent application a device that inherently performs a function or has a property, operates according to a theory or has an advantage, a patent application necessarily discloses that function, theory or advantage, even though it says nothing explicit concerning it. The application may later be amended to recite the function, theory or advantage without introducing prohibited new matter." (emphasis added). In re Reynolds, 443 F.2d 384, 170 U.S.P.Q. 94 (C.C.P.A. 1971); In re Smythe, 480 F. 2d 1376, 178 U.S.P.Q. 279 (C.C.P.A. 1973). Therefore, any commercially available "adaptive speaker identity verification system" can operate to perform the invention, as claimed, so that there is no need to go into any specific description of hardware in order meet the written description requirement under 35 U.S.C. § 112, first paragraph. It is respectfully believed that the Declarations of Mark Yoder and Michael Phillips provide the extrinsic evidence needed to establish inherency. "To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." In re Robertson, 169 F.3d 743,745, 49 U.S.P.Q.2d 1949 (Fed. Cir. 1999).

Therefore, it is respectfully believed that Claims 23, 25-31, 35, 37-39, 41-44 and 52-59 overcome the rejection under 35 U.S.C. § 112, first paragraph for failing to comply with the written description requirement.

Examiner disagrees. Examiner does not believe the portion of

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the MPEP cited above asserts or suggests that a mere example of some *type* of pattern recognition system referred to in the background section of the specification may be *conflated* into being the invention itself. However, new grounds of rejection of claims 23, 25-31, 35, 37-39, 41-44 and 52-59 under 35 U.S.C. § 112, first paragraph are provided in the current office action.

Rejection of Claims 23, 25-31, 35, 37-39, 41-44 and 52-59 Under  
35 U.S.C. § 112, 1<sup>st</sup>

Enablement

Applicant(s) argue(s):

Claims 23, 25-31, 35, 37-39, 41-44 and 52-59 were rejected under 35 U.S.C. § 112, first paragraph for failing to comply with the enablement requirement. As stated previously, Applicant has attached the Declarations under 37 C.F.R. §1.132 of Mark Yoder (see Appendix 1) and Michael Phillips (see Appendix 2), who are two renown experts in the field of electronic speech recognition. Both experts agree that an "adaptive speaker identity verification system" is a commercially available device and that anyone skilled in the art of deploying an "adaptive speaker identity verification system" would clearly understand this standard industry terminology and would not have to have any additional details regarding the computing platform such as the processors, memory, and machine-readable media. Both experts further state that: "the Invention disclosed in U.S. Patent Application No. 09/886,824 could be readily made by such a person skilled in the art using a common adaptive speaker identity verification system; it is a relatively simple and straightforward process that does not require any undue experimentation." (emphasis added).



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The Manual for Patent Examining Procedure ("M.P.E.P.") §2164.01 recites that "[a]ny analysis of whether a particular claim is supported by the disclosure in an application requires a determination of whether that disclosure, when filed, contained sufficient information regarding the subject matter of the claims as to enable one skilled in the pertinent art to make and use the claimed invention." The standard for determining whether the specification meets the enablement requirement was cast in the Supreme Court decision of *Mineral Separation v. Hyde*, 242 U.S. 261, 270 (1916) which postured the question: is the experimentation needed to practice the invention undue or unreasonable? That standard is still the one to be applied. In *re Wands*, 858 F.2d 731, 737, 8 U.S.P.Q.2d 1400, 1404 (Fed. Cir. 1988). Accordingly, even though the statute does not use the term "undue experimentation," it has been interpreted to require that the claimed invention be enabled so that any person skilled in the art can make and use the invention without undue experimentation. In *re Wands*, 858 F.2d at 737, 8 U.S.P.Q.2d at 1404 (Fed. Cir. 1988). See also *United States v. Telectronics, Inc.*, 857 F.2d 778, 785, 8 U.S.P.Q.2d 1217, 1223 (Fed. Cir. 1988). Moreover, "[a]ny part of the specification can support an enabling disclosure, even a background section that discusses, or even disparages, the subject matter disclosed therein." *Callicrate v. Wadsworth Mfg., Inc.*, 427 F.3d 1361, 77 U.S.P.Q.2d 1041 (Fed. Cir. 2005) (discussion of problems with a prior art feature does not mean that one of ordinary skill in the art would not know how to make and use this feature). Therefore, with both Mark Yoder and Michael Phillips, in their sworn Declarations, clearly indicating that this commercially available device could be easily adapted to use the Applicant's claimed Invention without any undue experimentation, there is strong evidence that Applicant's Invention, as claimed, is fully and completely enabled by a reading of the Applicant's patent application. Moreover, even complex experimentation, which this is not, would not lack enablement as long as it is not undue experimentation. In *re Certain Limited-Charge Cell Culture Microcarriers*, 221 U.S.P.Q. 1165, 1174 (International Trade Commission 1983), *affd. sub nom.*; *Massachusetts Institute of Technology v. A.B. Fortia*, 774 F.2d 1104, 227 U.S.P.Q. 428 (Fed. Cir. 1985). In this situation, due to the fact that this adaptive speaker identity verification system is a commercially available

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item, it is believed that the nature of the invention and nature of the invention under *In re Wands*, 858 F.2d 731, 737, 8 U.S.P.Q.2d 1400, 1404 (Fed. Cir. 1988) would clearly preclude of finding of lack of enablement since the methodology could easily be implemented on this standard commercial device under the reading of U.S. Patent Application No. 09/886,824 based on the sworn testimony of Mark Yoder and Michael Phillips. If a statement of utility in the specification contains within it a connotation of how to use, and/or the art recognizes that standard modes of administration are known and contemplated, 35 U.S.C. 112 is satisfied. *In re Johnson*, 282 F.2d 370, 373, 127 U.S.P.Q. 216, 219 (C.C.P.A. 1960); *In re Hitchings*, 342 F.2d 80, 87, 144 U.S.P.Q. 637, 643 (C.C.P.A. 1965). Therefore, it is respectfully believed that Claims 23, 25-31, 35, 37-39, 41-44 and 52-59 overcome the rejection under 35 U.S.C. § 112, first paragraph for failing to comply with the enablement requirement.

Examiner disagrees. Examiner does not believe the portion of the MPEP cited above asserts or suggests that a mere example of some type of pattern recognition system referred to in the background section of the specification may be *conflated* into being the invention itself. As the portion of the MPEP cited above states:

"[a]ny analysis of whether a particular claim is supported by the disclosure in an application requires a determination of whether that disclosure, when filed, contained sufficient information regarding the subject matter of the claims as to enable one skilled in the pertinent art to make and use the claimed invention."

Examiner finds no technical disclosure showing how "the NDS transform" is applied to speech identification (as claimed) in the specification. However, new grounds of rejection of claims

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23, 25-31, 35, 37-39, 41-44 and 52-59 under 35 U.S.C. § 112, first paragraph are given in the current office action.

Rejection of Claims 23, 25-31, 35, 37-39, 41-44 and 52-59  
Under 35 U.S.C. § 101

Applicant(s) argue(s):

Claims 23, 25-31, 35, 37-39, 41-44 and 52-59 were rejected under 35 U.S.C. §101 for failing to provide patentable utility. As previously stated, Applicant has attached the Declarations under 37 C.F.R. §1.132 of Mark Yoder (see Appendix 1) and Michael Phillips (see Appendix 2), who are two renown experts in the field of electronic speech recognition. Both individuals clearly indicate that the term "adaptive speech recognition system" is well known in the art for a specific type of commercially available machine that digitizes an analog voice signal and analyzes the digital voice signal using a processor to recognize the identity of the speaker. Moreover, it is respectfully believed that the term "adaptive" clearly indicates the presence of a machine and precludes this function being performed by a human being.

The test set forth by the Federal Circuit under *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008) is a two-prong "machine-or-transformation" test for determining whether an invention qualifies as patent-eligible subject matter. To summarize, in *Bilski*, the court announced that a "process" claim recites patent-eligible subject matter if "(1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing." *Bilski*, 545 F.3d at 954. In this case, an "adaptive speech recognition system" is a commercially available machine that digitizes an analog voice signal and analyzes the digital voice signal using a processor to recognize the identity of the speaker. It is respectfully believed to be undeniable that the Applicant's Invention, as claimed, is a machine. Since there is the electronic feature of

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digitizing analog voice signals, this machine is much more than a processor. So even using the standards set forth by the United States Patent and Trademark Office's Board of Patent Appeals and Interferences ("BPAI"), which has not been adopted by the Federal Circuit, this machine claimed by the Applicant is much more sophisticated and cannot be construed as just a "general purpose processor." See *Exparte Langemyr*, No. 2008-1495 (B.P.A.I. 2008).

It is respectfully believed that adaptive speech recognition using a commercially available machine that digitizes an analog voice signal and analyzes the digital voice signal using a processor provides a clearly patentable item, i.e., a machine, with a very specific and substantial utility of eliminating fraud, i.e., speaker identity verification. A "specific utility" is specific to the subject matter claimed and can "provide a well-defined and particular benefit to the public." In re Fisher, 421 F.3d 1365, 1371, 76 U.S.P.Q.2d 1225, 1230 (Fed. Cir. 2005). It is respectfully believed this fully comports with the "Examination Guidelines for the Utility Requirement" listed in §2107 of the Manual of Patent Examining Procedure (M.P.E.P.).

Therefore, it is respectfully believed that Claims 23, 25-31, 35, 37-39, 41-44 and 52-59 overcome the rejection under 35 U.S.C. § 101 for failing to provide patentable utility.

Examiner does not agree that applicant's invention is directed toward an "adaptive speech recognition system". However, in order to provide compact prosecution of the application examiner withdraws the the rejection of claims 23, 25-31, 35, 37-39, 41-44 and 52-59 under 35 U.S.C. §101 for failing to provide patentable utility.

### Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan H. Brown, Jr. whose telephone number is 571-272- 8632. The examiner can normally be reached on M-F 0830-1700. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Vincent can be reached on 571-272-3080. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Wilbert L. Starks, Jr./

Primary Examiner, Art Unit 2129

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Nathan H. Brown, Jr.

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Examiner, Art Unit 2129

August 4, 2009